

The speech of two- and three-year-olds to infant siblings: 'baby talk' and the context of communication*

JUDY DUNN AND CAROL KENDRICK

*MRC Unit on the Development and Integration of Behaviour,
University of Cambridge*

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ABSTRACT

Adjustments in speech made by 2- and 3-year-old children when talking to their 14-month-old siblings are described and compared with those made by mothers addressing their babies. 'Clarification' adjustments were made by all the children, but there were marked individual differences in the frequency of questions and 'affective-expressive' features – differences related to the quality of the relationship between the siblings. The pattern of speech adjustments reflected the social contexts in which the children addressed their siblings; within these contexts (prohibitory and playful) children as young as 2 make appropriate use of communicative devices. The individual differences between the children indicate two sources of influence on the adjustments made – pragmatic and emotional.

INTRODUCTION

It is clear that it is not just mothers who 'adjust' their speech when talking to infants and to children at the early stages of language acquisition. Shatz & Gelman (1973, 1977) have described speech adjustments made by 4-year-olds speaking to 2-year-olds, and Sachs & Devin (1976) have shown that similar features of 'motherese' are present in the speech of 4-year-olds addressing a doll who represents a baby. Shatz & Gelman argue that the occurrence of both the shorter, syntactically simpler utterances and the more complex grammatical utterances in the speech of 4-year-olds addressing 2-year-olds can be explained in terms of the appropriateness of the message

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for the particular communicative context (Shatz & Gelman 1977, Gelman & Shatz 1977). Their view is that the primary function of motherese is a communicative one, that in addressing young children the speaker selects utterances which the child will understand, and that one way (but not the only way) for the speaker to do this is to select syntactically simpler utterances. There is indeed evidence which suggests that the simplification of adult speech addressed to young children is influenced by the child's comprehension of the message, and by his/her linguistic capacity in general (Bellinger 1980, Snow 1972, Bohannon 1978, Sachs, Brown & Salerno 1976). Certainly the speech of adults to children changes markedly as the children grow up (for reviews see Gleason & Weintraub 1978, De Paulo & Bonvillian 1978; Snow 1977*b*). It is then the COMMUNICATIVE function of motherese that is emphasized in many studies of mother's speech to children of 6 months or more; it is also argued that the adjustments of mother's speech to younger infants are explicable in terms of the mother's concern to make herself interesting (Kaye 1980) or to keep the 'conversation' going between adult and infants (Snow 1977*a*).

In the accounts of the speech of 4-year-olds to younger children, the notion that the adjustments in the children's speech are adjustments to the listener's level of linguistic capability, his/her social competence and the particular social setting is of central interest. The evidence that 4-year-olds do make effective adjustments in speaking to younger children is difficult to reconcile with a view of children of this age as egocentric, and it raises questions about the developmental course of such sensitivity to the listener. We have as yet little systematic information on the nature of communicative adjustments which are made by children under 4 years of age, or on their development. During a longitudinal study of young siblings (Dunn & Kendrick 1979, 1980) samples of speech of 2- and 3-year-old children to their infant siblings were collected. Examination of these speech samples shows that children as young as two make considerable adjustments in the speech which they address to their infant siblings, but that there are marked individual differences in the nature of the adjustments made. In this paper, we describe some of the differences between the speech of the children to their infant siblings, and to their mothers, and consider the general issue of whether these adjustments in such young children do reflect a response to the problems of communicating with a linguistically and cognitively immature baby, a 'sensitivity to the listener'.

Baby talk, as spoken by adults to babies, has many different features – differences in prosody, in grammatical complexity, and in redundancy from adult speech to adults (Snow 1977*b*, Kaye 1980). These different features have been grouped by Brown into two components, components which reflect two different purposes or functions. The first is a communication–clarification component (COMM), which has as its motive the desire to be understood.

This 'communication-clarification' function is reflected in the prosodic features, in the frequent use of attention-getting and attention-holding devices noted in motherese (Snow 1977*b*, Kaye 1980), and in the simplification and redundancy of the speech. It is clear that catching and holding the attention of an infant does present different problems from that of capturing the attention of older children and adults.

The second is an expressive-affective component (AFF) which has as its chief motive the expression of affection. It is reflected in the use of diminutives, endearments, petnames and playful repetitions of names. Both Ervin-Tripp (1977) and Brown (1977) have pointed out that we know little about the relationship between the different baby-talk features, or how far particular features of baby-talk are related to the FUNCTION of utterances. Brown has raised the question of how far each of the two components is extended independently BEYOND the speech of adults to babies, or how far they are necessarily extended together. He hypothesized (1977: 6) that 'persons, animals and things whose primary characteristic is cognitive and linguistic incompetence will be addressed primarily in a one-dimensional COMM register; and that persons, animals and things whose primary characteristic is the inspiration of affection will be addressed in a one-dimensional AFF register; and that persons who combine cognitive and linguistic incompetence with the inspiration of affection and intimacy will be addressed in the two-dimensional COMM-AFF register, which is in fact BT (Baby talk).'

It is a safe presumption that most pre-linguistic babies do inspire affection in their mothers and fathers, and that the adjustment in their parents' speech reflect a response to both the sets of characteristics which Brown identifies. But the speech of elder siblings presents a very different case. It is not a safe presumption that most first-born children regard their younger siblings with affection: it is notable that there is a particularly wide range of individual differences in the warmth and affection shown by children towards their siblings. In some families in the present study, 100 % of the interactions between the siblings was characterized by negative behaviour from the first-born child; in others, the great majority of interactions (94 %) were affectionate and playful.

In considering the differences in the speech of the children to their siblings and to their mothers we will then examine the occurrence of both clarification features and affective features. The prediction will be made that while the clarification features will be present in the speech of all the children, the affective features of baby talk will be present in the speech of some of the children and not others, and that the appearance of this affective-expressive component will be associated with other features of the sibling's relationship.

Specifically we shall examine the following questions:

- (1) Do children of 2-3 years old addressing their 14-month-old siblings

adjust their speech by increasing the frequency of the clarification features described in the speech of mothers to infants, and highlighted in the studies of the speech of 4-year-olds to younger children (Shatz & Gelman 1977, Sachs & Devin, 1976)? The speech of the 2-year-olds to their siblings and to their mothers will be compared in terms of the frequency of attention-getting and attention-holding devices, repetitions, and MLU as a rough index of complexity.

(2) Why do children of this age use baby-talk to their siblings? Do the adjustments in speech made by the 2- to 3-year-olds reflect imitation of the mothers' style of speech to the babies – a replication of speech appropriate to the role of 'mother with baby', as revealed in the 'doll' studies of Sachs & Devin (1976) – or do they reflect a response to the particular constraints of communicating with a pre-linguistic infant? The conversational contexts in which the children addressed their infant siblings will be examined, and compared with the contexts in which the mothers talked to the babies.

(3) Does the speech of 2- to 3-year-olds to their siblings include affective-expressive features – the use of endearments, diminutives and repetitive word play? The occurrence of these features will be examined in relation to the observed differences between children in their non-verbal expression of affectionate interest in the sibling.

METHODS

Subjects

The children who were the subjects of this analysis were taking part in a longitudinal study of 40 first-born children and their younger siblings (see Dunn & Kendrick (1980) for a description of the study and selection of the sample). The study included two home visits made when the younger sibling was 1;2; during each of these home visits, unstructured observations were carried out during which 1-hour speech samples of naturally occurring speech were recorded. To compare the child's speech to infant sibling and to mother we analysed the two 1-hour speech samples of the first 13 children in the study who were aged less than 3;0 at the visit when their siblings were 1;2. These 13 children (6 boys and 7 girls) ranged in age from 2;10 to 3;0. The analysis of questions, diminutives and playful repetitions was based on the analysis of the speech samples from the full sample of 40 first-born children (21 boys, 19 girls, age range 2;8–3;9).

Speech samples

Recordings were made on a Sony portable tape cassette, and were transcribed by the observer shortly afterwards. For the analyses reported below, the data were coded by two independent judges. The reliability of the coding was estimated in terms of the agreement between coders (agreement divided by

agreement + disagreement) and in terms of consistency over time: the same coder recorded half the transcripts approximately one month apart. The agreement ratio between coders for the speech measures reported below ranged from 0.91 to 1.0. The agreement ratio for recoded transcripts for the same measures ranged from 0.95 to 1.0.

Coding

(1) *Utterance length: MLU*. MLU has been used in most studies of mother's speech to children; it was therefore included in the analysis as a rough index of complexity, although there are many problems associated with using MLU as a measure of complexity of speech (Cazden 1972, Cross 1976). The MLU was calculated, following the procedure of Shatz & Gelman (1973), for the children's speech to mother and to baby.

(2) *Attention-getting and attention-holding devices*. Frequent use of attention-getting devices has been reported in mothers' speech to children (Snow 1972), and in the speech of 4-year-olds to younger children (Shatz & Gelman 1973, Sachs & Devin 1976). The proportion of utterances which contained attention-getting words was determined for the child's speech to mother and to baby, and the mother's speech to baby, using the categorization of Shatz & Gelman (1973): an utterance was scored as an attentional utterance if it included one or more 'attention-getting' or 'attention-holding' words; these included *hey, see, hullo, look, watch, stop, no* (when used to stop the listener's action, see Klima & Bellugi-Klima 1971), noises such as *aah* and *ooh*, and listener's name (including 'Mummy') as attention-getters; and *now, O.K.*, when used as attention-holders. It thus included both the 'phatics' coded by Kaye (1980), and the use of names.

(3) *Repetitions*. Repetition of utterance constituents or entire utterances is frequent in the speech of adults to small children (Snow 1972, 1977). Repetitions are used in a variety of communicative contexts, and fulfil very different functions. In the present analysis an utterance was counted as a repetition if it used some word(s) from the preceding utterance and maintained the same semantic intent (as in Sachs & Devin 1976). Repetitions were categorized as (1) repetitions of prohibitions, (2) repetitions in other contexts. Subdivisions of the latter category included (a) repetitions which were in response to a request for clarification; (b) repetitions which were themselves requests for clarification; (c) playful repetitions: repetitions in which words or utterances were repeated in a 'ritualized', precisely timed fashion to form part of a 'game', often chanted and/or uttered in a 'high' voice, or with very exaggerated intonation (see Garvey 1977), e.g.

(1) Case 2: (*Child puts plastic pants on her sister's head and chants to her*):

Go to your father.

Go to your father.

Go to your father.

(repeated a further 6 times);

(d) other repetitions. The proportion of utterances containing repetitions was calculated for the child's speech to mother and to baby, and the mother's speech to the baby.

(4) *Questions*. Adult speech to infant and young children contains more questions than speech to adults (Snow 1977a, Bingham 1971, Longhurst & Stepanich 1975, Sachs, Brown & Salerno 1972). The proportion of utterances that were in interrogative form was calculated for the child's speech to the baby and for the mother's speech to the baby. Interrogative forms were defined as utterances with S-V inversion, containing a tag, and/or having question intonation (as in Snow 1977a).

(5) *Diminutives/endearments*. The use of diminutives, 'cute' euphemisms or endearments is common in the speech of adults to babies (also to pets, lovers, etc). Utterances in the child's speech which contained diminutives (as in *doggie-woggie* for *dog*) or affectionate versions of the baby's name (*Kay-Kay* for *Kate*) were categorized as utterances with diminutives.

(6) *Functional analysis*. The utterances of the child to baby, and the mother to baby were categorized as follows:

- (a) Control: (i) prohibition;
 - (ii) commands used to distract;
 - (iii) commands/directives occurring within games/play.
- (b) Other: (i) enquiries about internal state;
 - (ii) requests for action/information;
 - (iii) show/tell;
 - (iv) other.

(7) *Imitation of mother's speech to baby*. Utterances by the child to the baby which included complete or partial repetitions by the child of utterances made by the mother to the baby at any point in the transcript were categorized as imitations. The comparison of child's speech to the baby and to the mother for the 13 families was based on 2,591 child utterances to the mother and 877 utterances to the baby and on 1,992 mother utterances to the baby.

(8) *Behaviour of older child to younger*. Positive socially directed behaviour was categorized as occurring when the child showed any of the following behaviour items towards the sibling during the observations; gives/shows object, smiles, laughs, touches affectionately, helps, comforts, approaches and sits very close, replicates (imitates) action of sibling while looking at sibling, takes active part in joint physical play, takes active part in games with sibling, vocalizes (other than prohibition or protest). This summary category was analysed in terms of frequency per 1,000 10-second units of observation. Inter-observer reliability (ratio of agreement to agreement + disagreement): 0.84.

RESULTS

MLU. Attentional utterances and repetitions

The Wilcoxon Matched Pairs Test was used to compare the MLU, proportion of attentional utterances and proportion of repetitions in the child's speech to sibling and to mother (Table 1). There were significant differences in each of these measures.

TABLE 1. *Comparison of child's speech to mother and to sibling, and mother's speech to sibling*

	Child to sibling	Child to mother	Mother to sibling
MLU (median)	2.49	3.45**	3.40**
Proportion of attentional utterances (median %)	40.0	9.8**	17.5**
Proportion of repetitions (median %)	30.8	17.7**	16.3**

** $P < 0.01$, compared with child to sibling, Wilcoxon t test, $N = 13$.

TABLE 2. *Proportion of repetitions in prohibitory context*

	Child to sibling	Mother to sibling
Proportions of repetitions in prohibitory context (median %)	61.1	17.9**

** $P < 0.01$, Wilcoxon t test, $N = 13$.

It would however be misleading to suggest that these systematic differences in the way in which the children spoke to their siblings and to their mothers paralleled very closely the changes in mothers' speech when they addressed their babies. When the particular contexts in which child and mother spoke to the baby were examined, the results showed that the increase in the proportion of attentional utterances and repetitions was in response to rather different situations in the two cases. In the speech of child to sibling, repetitions and attentional utterances were frequently used in situations where the child was attempting to prohibit, dissuade or restrain the sibling from some action. A significantly lower proportion of maternal repetitions and attentional utterances to the baby occurred in prohibitory contexts (Table 2). There was in fact a much higher proportion of repetitions and attentional utterances in the speech of the children to the baby than in the speech of the mothers to the babies (Table 1). The three quotations which follow, typical examples of 2-year-olds addressing their infant siblings in the course of

playing with them, illustrate the frequent use of repetitious and attentional devices:

- (2) Case 33: You have this one. There Kay-Kay look! Kay-Kay Kay-Kay look. Kay-Kay. Kay-Kay. Look. Kay-Kay. Look. Teddy. Look. Teddy. Look. Kay-Kay. Kay-Kay. Kay-Kay. Teddy. Kay-Kay. Kay-Kay look. Lorry. Baby. Look. Look.
- (3) Case 20: Come on Len. Come on. Come on. Come on. Len come on. Next time. Next time. Come on.
- (4) Case 25: Trevor Trevor. Stop it. No. No. Stop it Trevor. No.

It is possible that the higher proportion of attentional utterances and repetitions in the children's speech indicates that the children experienced greater difficulty than the mothers in securing the attention, and the response which they desired, from the babies. But the point to be stressed is that it was clear from Table 1 that the children WERE adjusting their speech in the face of the particular and immediate communicative pressures of the situation. The following three quotations illustrate the use of attentional utterances, repetitions and the progressive shortening of utterances typically used by the children in their attempts to direct the behaviour of the baby:

- (5) Case 8: (*Child is attempting to prevent his baby brother from eating a sweet which he has found on the floor. He tells him the dog (Scottie) will eat it and then tries to get him to go into the kitchen*): No don't you eat it. Scottie will eat it. Scottie will eat it. No not you. Scottie will eat it. Not you. Scottie. Not you. Shall we go in door? Right. Come on. Come on. In door Robin. In door.
- (6) Case 4: (*Child attempting to direct sibling while both are playing with Lego, and to prevent her putting Lego in her mouth*): No that goes to stick on there that does. You're not going to eat that Lego. You get smack. No no no no. No no no no. No no no.
- (7) Case 14: (*Children playing a game with towers of blocks*): Marlene go on knock it down. Come and knock it down Marlene. Come and knock it down Marlene. Come on knock it down. Knock it down Marlene. Knock it down. Marlene. Come on. Marlene.

'Clarification' features of baby talk and the context of communication

Why do such young children use baby talk to their infant siblings? In considering the use of the features of baby talk associated with clarification of communication – the shortened utterances, attentional devices, and repetitions – it is important to note that a very high proportion of the children's speech to the babies occurred in a context where the elder child was either trying to prohibit directly the action of the younger, or to command and direct the baby in play.

Table 3 shows the proportion of utterances which fell into the category of control (either direct prohibition, or commands in a play situation) in the

speech of child to sibling, and to mother. In each of these two contexts it was clearly important for the elder child to 'get the message across'. The fact that such a high proportion of the child's utterances to the sibling occurred in a situation where there was a particularly urgent need for the child to make himself understood by the baby may well have contributed to the greater proportion of such 'clarification' features in the child's speech to the baby than in the mother's speech to the baby (Table 1). The interaction between these young siblings was very frequently NON-VERBAL in nature. The elder child used WORDS to the sibling only in a small proportion of their interactions – namely those interactions where the child was particularly concerned to influence the baby's actions. The proportion of the mother's speech to the baby in which the mother was directly concerned to prohibit or direct the baby's actions was much lower, since the mothers frequently engaged in verbal play and imitation sequences, attempted to distract the babies while caretaking or comforting, or simply commented to the babies on their own actions while continuing in household activities.

TABLE 3. *Proportion (%) of child's speech to sibling and to mother in different functional categories*

	Control		Total control	Other				Total other
	Pro- hibition	Game		Enquiry into in- ternal state	Request infor- mation or action	Show/ tell	Other	
Child to sibling	46.8	24.5	71.3	2.4	0.0	12.3	14.0	18.7
Child to mother	0.4	4.2	4.6	15.3	15.6	14.9	49.6	95.4

Questions

There were very marked differences between the children and mothers in the frequency with which they used questions in speaking to the baby. Only 5 of the 13 children addressed the baby in interrogatives, while all of the mothers did so. The frequency of questions in the mothers' speech ranged from 14.7% to 42.1% of utterances, with a median of 25.8%. This high frequency parallels the findings of other studies of mothers' speech to infants.

Two issues are raised by these differences between mothers and children in their use of questions. First, why did the mothers use so many questions in addressing the babies, and second, what are the implications of this questioning style of address for the structure of the interaction between speaker and baby?

Snow (1977a) has argued that the very high frequency of questions in the

speech of mothers to infants contributes to the CONVERSATIONAL nature of the interaction between mother and baby. She contends (p. 20) that 'questions, especially tag-questions and other post-completers like *Hmm?* are devices for passing the turn to the partner, which is precisely what mothers are trying hardest to do'. In relation to the first issue, Snow links the frequency of questions to the mothers' desire to communicate reciprocally with their infants. The significance of a high frequency of questions for the mother's role in maintaining dialogue extends well beyond infancy, into the third year (Kaye & Charney 1980, 1981). The analysis of the behaviour of the older child towards the infant sibling had shown that there were very marked individual differences between the first-born children in the extent to which they attempted to engage in reciprocal interaction with their siblings (Dunn & Kendrick 1979), and it appeared likely that differences between the children in their use of questions were associated with more general differences between children in their affectionate interest in, and behaviour towards the sibling. (A high proportion of the questions which the children directed to the infant were in fact enquiries about the infant's state, wants or needs.) It was decided, therefore, to examine the occurrence of questions in relation to diminutives, endearments and playful verbal repetitions, in the full sample of 40 children, in order to have a larger data base from which to explore these individual differences in children's speech style.

The 40 children were divided into two groups: those who used questions in speaking to the baby, and those who did not. The children were also divided into two groups according to whether or not they used diminutives in speaking to the baby, and into two groups according to whether or not they used playful repetitions with the baby. There were significant positive associations between these three features of speech; that is, a child who used questions in addressing the baby was likely to use diminutives ($\chi^2 = 11.3$, $P < 0.001$) and to use repetitive verbal play ($\chi^2 = 17.6$, $P < 0.001$). Twenty-three of the 40 children never used any of these features when speaking to the baby.

Individual differences in the use of diminutives, questions and playful repetitions

(a) *Age and sex.* The use of diminutives, questions and repetitive verbal play was unrelated to the age or sex of the child.

(b) *Quality of interaction between siblings.* As part of the observational study of the sibling pairs, the frequency and proportion of positive social approaches made by older to younger child had been recorded. When the relationship between these two measures and the occurrences of diminutives, questions and playful repetitions was examined, the results showed significant positive associations between the observational measures of the older child's positive social behaviour towards the baby, which was largely non-verbal in nature, and the three affective-expressive features (Table 4).

The children who used questions, then, were children who were more affectionately interested in their infant siblings, and whose motivation to engage the baby in playful interaction was markedly higher than that of the children who did not address their siblings in this way. Most of the children's questions to the sibling indeed occurred in a sequence of play between the children, as the following examples illustrate.

(8) Case 2: Can you do that? Can you do that? Can you? So you want me to do it again?

(9) Case 37: Shall I wind it up for you, Baby? Shall I wind it up?

TABLE 4. *Association between use of diminutives, questions and playful repetitions in child's speech to the sibling, and observed positive social approaches*

	Diminutives		Questions		Playful repetitions	
	Present	Absent	Present	Absent	Present	Absent
Positive social approaches (median per 1,000 10-second units)	24.1	17.8*	26.6	17.0*	29.8	17.0**

* $P < 0.05$.

** $P < 0.01$, both by Mann-Whitney U test, $N = 40$.

The second issue raised by the differences between children and mothers in the frequency of questions concerned the structure of the interaction. Snow argues that the frequent use of questions is linked in an important way to the development of turn-taking skills in babies. The data from our sample of 40 families are fully congruent with her proposition that the exchange between mother and baby fits a 'conversational' model, and that questions play an important part in many of the turn-taking sequences. Vocal turn-taking sequences between mother and infant occurred in the speech samples of 39 out of the 40 families, and many of these included questions from the mother. (*In this and the following examples, the baby sibling is referred to as B and the first-born child as C.*)

(10) Case 29: M. Go on. You terror.

B. Aah.

M. What?

B. Aah.

M. Come on then. Show me. You want a drink?

B. Aah.

M. All right I'm getting it. Come on then.

Very often the questions which formed part of the turn-taking sequence involved enquires of this sort by the mother about the baby's wishes. They reflected a concern, on the mother's part, to understand more clearly the

baby's intentions or needs. But it should be noted that there were several other types of turn-taking sequence between mother and infant; particularly frequent were imitative interactions:

- (11) Case 38: M. Ha.
 B. Ha.
 M. Ha.
 B. Ha.

Often the 'conversation' involved both questions and imitations:

- (12) Case 29: M. What do you want? Oh dear we are miserable. Come on.
 What's the matter? Eh? What do you want? (*offers cup*)
 B. (*pushes cup away*)
 M. You don't want that do you?
 B. (*reaches for spoon*)
 M. Do you want a spoon? There's nothing on it. Nothing to
 eat. Can you see Joyce in it? Look. You're upside down.
 There's Joyce look. Joyce.
 B. Mmm.
 M. Mmm.
 B. Mmm.
 M. Mmm.
 B. Mmm.

The striking differences between mothers and children in the frequency of questions in their speech to the infant reflect, in fact, a more general distinction, that the 'conversational' model is much less appropriate to describe the speech of the child to the baby. Vocal turn-taking sequences were in fact very rare between child and sibling, and occurred in only two families of the 40 studied. (It should be stressed that it was only VOCAL turn-taking sequences that were infrequent between child and infant sibling: other forms of reciprocal turn-taking interactions, such as co-operation in games, or sequences of non-verbal imitation were often observed between the children.) What distinguished the mother-infant interaction from the child-sibling interaction was not only the concern of the mother to engage the baby in such 'conversations', to understand his/her wishes, and to play vocal 'games', but the behaviour of the INFANT towards his/her hearers. By 1;2 the baby was not only initiating many of the vocal turn-taking sequences with the mother, but playing a central part in maintaining the 'conversation'. Sometimes this involved considerable perseverance in holding the attention of the mother:

- (13) Case 29: B. (*pointing*) Aaah.
 M. Oh yeah. What is it?
 B. (*pointing*) Aaah.
 M. No he's not there.
 B. (*pointing*) Aah.

M. What? What is it?

B. Aah.

M. Oh yeah.

B. Adaah.

M. Yeah.

B. Adaah.

M. Yeah.

B. (*pointing*) Adaah.

(14) Case 32: B. (*pointing to something; Mother pays little attention and apparently does not see what B is pointing at*).

B. Look.

M. Look? Look at what? Look what? Yeah lights and flies in't it? Blooming flies.

B. Look.

M. Yeah flies. Horrible things.

B. Look.

M. Yeah that's a light.

B. Look. (*increasingly agitated*)

M. Yeah lovely.

B. Look. (*increasingly agitated*)

M. You getting frustrated?

Such behaviour was never directed towards the sibling. The developmental course of these differences in the BABIES' behaviour towards different partners is discussed in Dunn & Greenwood (1979), where data on the development of gestures and vocal turn-taking with mother, father and sibling is described for babies between 0;6 and 1;1.

Context and the use of diminutives

The question of whether baby talk features of speech are maintained consistently, or whether there are shifts in and out of the register according to the social context was raised by Ervin-Tripp (1977). While the clarification features were consistently used by the children in prohibiting or directing situations, the use of diminutives, repetitions in play and questions showed a different distribution. With the exception of two utterances, all the utterances in which diminutives were used occurred when the elder child was inviting the younger to play:

(15) Case 1: (*Child trying to get brother (Graham) to come and play in the next room with him*): Come on Gramie. Come on tinker-winker!

(16) Case 33: (*Child showing sister (Kate) toys in a box*): There Kay-Kay look! Kay-Kay! Kay-Kay look! Kay-Kay! Kay-Kay! Look! Look Baby-baby...

The two utterances which were exceptions to this pattern occurred when the

elder child was trying to comfort the younger who was in a state of distress. Such diminutives were never used by the children, that is, in prohibiting contexts.

Imitation of the mother

It could be argued that the adjustments in speech made by such young children in talking to their infant siblings reflect imitation of the MOTHER'S style of speech to the baby, rather than adjustments made by the children in direct response to the constraints of communicating with a linguistically and cognitively immature infant, in a particular range of social contexts. The frequency with which imitations (full or partial) of the mother's speech to the baby occurred on our transcripts was examined, and the results showed that such imitations occurred in 32 out of 877 child-to-baby utterances (3.6 % of utterances). This frequency of imitations is perhaps surprisingly low, given (a) that the mother's speech to the baby is characterized by features that would draw the elder child's attention (exaggeration of intonation, vividness of expression, etc.), and (b) that interaction between mother and baby, non-verbal as well as verbal, is in most families a potent source of interest and of considerable emotional significance to the elder child. In many cases interaction between mother and baby has a direct effect on the behaviour of the elder child (Dunn & Kendrick 1979, Kendrick & Dunn 1980). When the particular utterances that are imitated are examined, it is notable that the great majority of them are NOT utterances where the elder child is directly engaged in prohibiting in playing with or in comforting the younger. Rather, they are frequently vivid expostulations, which were made by the mother – often used in greeting the baby, and often also perjorative in tone – which were immediately repeated by the child.

(17) Case 29: M. (to B) You're a little monkey.

C. (to B) Monk.

(18) Case 34: M. (to B) Bad boy.

C. (to B) Bad boy.

(19) Case 39: M. (to B) Hello you rat bag.

C. (to B) Hello you hairy rat bag.

(20) Case 39: M. (to B) You're a clever clogs.

C. (to B) Clever clogs.

These observations cannot provide us with an assessment of the importance of the parents' style of speech to the baby as an influence on the child's speech to the baby. But they do suggest that in interactions where it is important for the child to make himself understood by the baby, he adapts his speech by clarifications and/or by affective expressions of his own, in a generative fashion, rather than by simple repetitions of the mother's speech.

CONCLUSIONS

The 2- and 3-year-old children in this study did make systematic adjustments in their speech when talking to their infant siblings. There were both similarities and differences between these adjustments and those made by mothers talking to their babies. The adjustments of clarification (the increase in attentional utterances and repetitions and the shortening of utterances) were apparent in all children studied, but the affective-expressive features were present only in the speech of the children who had particularly warm and affectionate relationships with their siblings. Questions were far less frequent in the speech of children to babies than in the speech of mothers to babies, and the 'conversations' between children and babies were very short in terms of changes in partner 'turns'. The pattern of speech adjustment reflected the particular social context in which the young children addressed their siblings – prohibiting and restraining, and directing in play. In both these situations, children as young as two make clear adjustments in their speech, and make appropriate use of communicative devices. This appropriate use of speech adjustments in prohibiting and directing contexts was paralleled by the success with which some children used affectionate diminutives and playful repetitions in engaging the baby in play. What the findings show is that these very young children adapt their speech in ways which it would be rational for them to do if and only if they hold beliefs about the linguistic and cognitive status of the creatures they are addressing which differentiate them from their mothers and the other adults they speak to. This result seems unsurprising in the light of the fact that the children do frequently ASSERT beliefs about the properties of the baby sibling, which show that they have a very clear grasp of the differences between its properties and those of either adults or children of their own age, and that they ACT towards the baby in a way which shows a complex pragmatic grasp of such disparities (see Dunn & Kendrick 1981, also Bretherton, McNew & Beeghly-Smith 1981).

The individual differences in affective-expressive speech which were found between the children indicate that there were two major sources of influence on the kinds of adjustment which children made in their speech to the baby: a pragmatic one – what they were trying to achieve in addressing the baby; and an emotional one – the quality of the relationship between them. The results confirm the hypothesis that the use of devices such as repetitions (other than those of verbal play) and attentional utterances is based less on the affect between speaker and hearer, at least in these young children, than is the use of baby talk diminutives, endearments and questions.

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